



Well Name: MONTOYA 1R; BHD
 API #: 3004532335
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS2021162
 Cust No: 35825-11790

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	MONTOYA 1R; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	80 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3004532335	Sample Method:	
	85-973	Sample Date:	07/28/2021
		Sample Time:	3.20 PM
	RUN 2 / AREA 0211	Sampled By:	
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:	PRESSURED WITH HELIUM TO 30LBS.		

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	9.1322	2.2193	1.0070	0.00	0.0883
CO2	0.0000	0.0000	0.0000	0.00	0.0000
Methane	83.4231	20.2733	14.1730	842.57	0.4621
Ethane	4.3890	1.0666	1.1760	77.67	0.0456
Propane	1.3464	0.3272	0.3720	33.88	0.0205
Iso-Butane	0.5510	0.1339	0.1810	17.92	0.0111
N-Butane	0.3255	0.0791	0.1030	10.62	0.0065
I-Pentane	0.3086	0.0750	0.1130	12.35	0.0077
N-Pentane	0.0584	0.0142	0.0210	2.34	0.0015
Hexane Plus	0.4658	0.1132	0.2080	24.55	0.0154
Total	100.0000	24.3018	17.3540	1021.90	0.6586

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0024	CYLINDER #:	101
BTU/CU.FT IDEAL:	1024.3	CYLINDER PRESSURE:	2 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1026.6	ANALYSIS DATE:	08/04/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1008.7	ANALYSIS TIME:	03:38:24 PM
DRY BTU @ 15.025:	1047.2	ANALYSIS RUN BY:	PATRICIA KING
REAL SPECIFIC GRAVITY:	0.6599		

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500 Last Cal/Verify: 08/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	MONTOYA 1R; BHD	BRADENHEAD	08/06/2021
Stn. No.:	3004532335		35825-11790
Mtr. No.:	85-973		

Smpl Date:	07/28/2021	07/25/2019
Test Date:	08/04/2021	08/07/2019
Run No:	HS2021162	HS190208
Nitrogen:	9.1322	0.1433
CO2:	0.0000	0.8145
Methane:	83.4231	84.6261
Ethane:	4.3890	8.0878
Propane:	1.3464	3.0661
I-Butane:	0.5510	0.6116
N-Butane:	0.3255	0.8711
I-Pentane:	0.3086	0.4136
N-Pentane:	0.0584	0.2945
Hexane+:	0.4658	1.0714
BTU:	1026.6	1214.9
GPM:	17.3540	18.7760
SPG:	0.6599	0.6980



Well Name: MONTOYA 1R; CSG

API #: 3004532335

Source: CASING

Sample Type: GAS

Analysis No: HS2021163

Cust No: 35825-11800

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: MONTOYA 1R; CSG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.: 3004532335
85-973

AREA 2 / RUN 0211

Heat Trace: N

Remarks:

Source: CASING

Well Flowing: Y

Pressure: 160 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 07/28/2021

Sample Time: 3.31 PM

Sampled By:

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1498	0.1474	0.0170	0.00	0.0014
CO2	2.7867	2.7416	0.4770	0.00	0.0423
Methane	80.8455	79.5360	13.7520	816.54	0.4478
Ethane	8.2178	8.0847	2.2050	145.43	0.0853
Propane	3.9400	3.8762	1.0890	99.13	0.0600
Iso-Butane	0.8924	0.8779	0.2930	29.02	0.0179
N-Butane	1.4076	1.3848	0.4450	45.92	0.0282
I-Pentane	0.5904	0.5808	0.2170	23.62	0.0147
N-Pentane	0.4859	0.4780	0.1770	19.48	0.0121
Hexane Plus	0.6839	0.6728	0.3060	36.05	0.0226
Total	100.0000	98.3802	18.9780	1215.19	0.7325

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1218.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1222.4
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1201.1
 DRY BTU @ 15.025: 1246.9
 REAL SPECIFIC GRAVITY: 0.7349

CYLINDER #: 03
 CYLINDER PRESSURE: 150 PSIG
 ANALYSIS DATE: 08/04/2021
 ANALYSIS TIME: 03:53:09 AM
 ANALYSIS RUN BY: PATRICIA KING

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

Last Cal/Verify: 08/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	MONTOYA 1R; CSG	CASING	08/06/2021
Stn. No.:	3004532335		35825-11800
Mtr. No.:	85-973		

Smpl Date:	07/28/2021	07/25/2019
Test Date:	08/04/2021	08/07/2019
Run No:	HS2021163	HS190210
Nitrogen:	0.1498	0.1365
CO2:	2.7867	1.3761
Methane:	80.8455	82.5456
Ethane:	8.2178	7.9481
Propane:	3.9400	3.5462
I-Butane:	0.8924	0.7909
N-Butane:	1.4076	1.2344
I-Pentane:	0.5904	0.5528
N-Pentane:	0.4859	0.4530
Hexane+:	0.6839	1.4164
BTU:	1222.4	1252.0
GPM:	18.9780	19.0590
SPG:	0.7349	0.7309



Well Name: MONTOYA 1R; TBG

API #: 3004532335

Source: TUBING

Sample Type: GAS

Analysis No: HS2021164

Cust No: 35825-11875

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: MONTOYA 1R; TBG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.: 3004532335
85-973

AREA 2 / RUN 0211

Heat Trace: N

Remarks:

Source: TUBING

Well Flowing: Y

Pressure: 160 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 07/20/2021

Sample Time: 3.24 PM

Sampled By:

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1709	0.1700	0.0190	0.00	0.0017
CO2	0.5940	0.5909	0.1020	0.00	0.0090
Methane	84.3587	83.9241	14.3430	852.02	0.4673
Ethane	8.5002	8.4564	2.2800	150.43	0.0882
Propane	3.4461	3.4283	0.9520	86.71	0.0525
Iso-Butane	0.7345	0.7307	0.2410	23.89	0.0147
N-Butane	0.9238	0.9190	0.2920	30.14	0.0185
I-Pentane	0.4312	0.4290	0.1580	17.25	0.0107
N-Pentane	0.2528	0.2515	0.0920	10.13	0.0063
Hexane Plus	0.5878	0.5848	0.2630	30.98	0.0195
Total	100.0000	99.4847	18.7420	1201.55	0.6884

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
 BTU/CU.FT IDEAL: 1204.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1208.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1187.2
 DRY BTU @ 15.025: 1232.4
 REAL SPECIFIC GRAVITY: 0.6904

CYLINDER #: 046
 CYLINDER PRESSURE: 156 PSIG
 ANALYSIS DATE: 08/04/2021
 ANALYSIS TIME: 03:05:39 PM
 ANALYSIS RUN BY: RICHARD WILSON

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

Last Cal/Verify: 08/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	MONTOYA 1R; TBG	TUBING	08/06/2021
Stn. No.:	3004532335		35825-11875
Mtr. No.:	85-973		

Smpl Date:	07/20/2021	07/25/2019
Test Date:	08/04/2021	08/07/2019
Run No:	HS2021164	HS190209
Nitrogen:	0.1709	0.1635
CO2:	0.5940	0.0070
Methane:	84.3587	90.9564
Ethane:	8.5002	5.3050
Propane:	3.4461	1.6741
I-Butane:	0.7345	0.7351
N-Butane:	0.9238	0.4109
I-Pentane:	0.4312	0.3798
N-Pentane:	0.2528	0.0731
Hexane+:	0.5878	0.2951
BTU:	1208.2	1131.3
GPM:	18.7420	18.0300
SPG:	0.6904	0.6316

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 44316

COMMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 44316
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

COMMENTS

Created By	Comment	Comment Date
mkuehling	appears to be same gas	9/3/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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CONDITIONS

Action 44316

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 44316
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	similar gas all strings	10/18/2021